

03/31/14 Agenda:

- Remediation Packet for Unit 8 due TODAY.
- Tessellation Project is due TOMORROW!!!
- Section 11.1 day 1 - Perimeter & Area of Parallelograms
- Homework
 - Worksheet 1 - Perimeter & Area of Parallelograms

Section 11.1 day 1 - Perimeter & Area of Parallelograms

Targets 11A, 11B, & 11C

March 31, 2014

Goal: Find the Area and Perimeter of Squares, Rectangles, & Parallelograms.

Definitions: **Perimeter:** The total distance around an object.

Area: The total number of square units inside an object.

Area of a Square Postulate:

The area of a square is the square of the length of its sides.

Area Congruence Postulate:

Congruent polygons have the same area.

Area Addition Postulate:

The area of a region is the sum of the areas of its nonoverlapping parts.

Area of a Rectangle:

The area of a rectangle is the product of its base and height.

Area of a Parallelogram:

The area of a parallelogram is the product of its base and height.

$$A_{sq} = s \cdot s \\ = s^2$$

or

$$b \cdot h$$



$$A_{rect} = b \cdot h$$

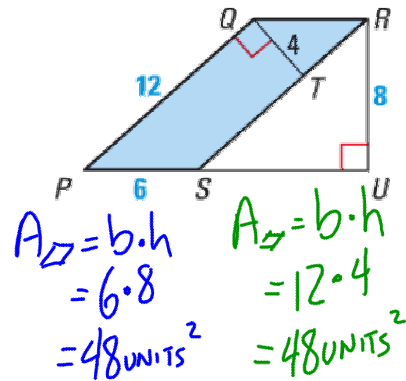
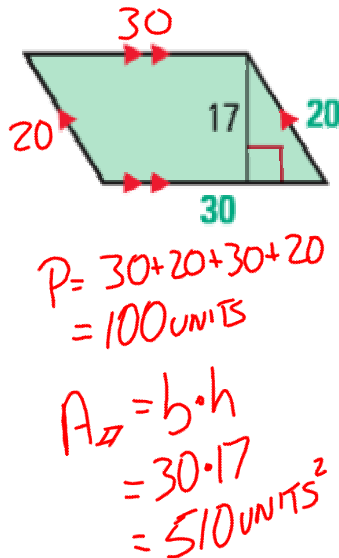
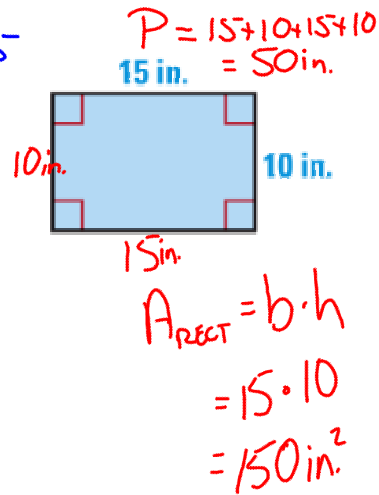
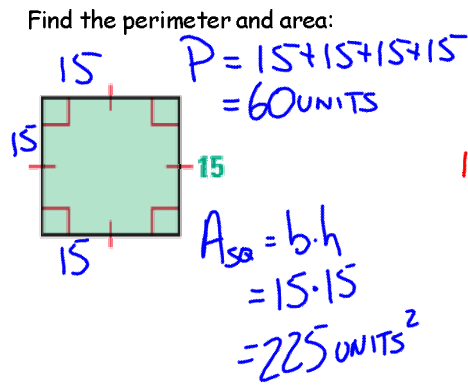
$$A_{\square} = b \cdot h$$

Section 11.1 day 1 - Perimeter & Area of Parallelograms

Targets 11A, 11B, & 11C

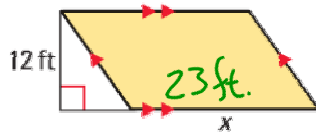
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Find the perimeter and area:



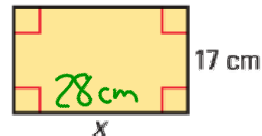
Find the value of x :

$A = 276 \text{ ft}^2$



$A_{\square} = b \cdot h$
 $276 \text{ ft}^2 = x \cdot 12 \text{ ft.}$
 $\frac{276 \text{ ft.}}{12 \text{ ft.}} = \frac{x \cdot 12 \text{ ft.}}{12 \text{ ft.}}$
 $23 \text{ ft.} = x$

$A = 476 \text{ cm}^2$



$A_{\square} = b \cdot h$
 $476 \text{ cm}^2 = x \cdot 17 \text{ cm}$
 $\frac{476 \text{ cm}^2}{17 \text{ cm}} = \frac{x \cdot 17 \text{ cm}}{17 \text{ cm}}$
 $28 \text{ cm} = x$

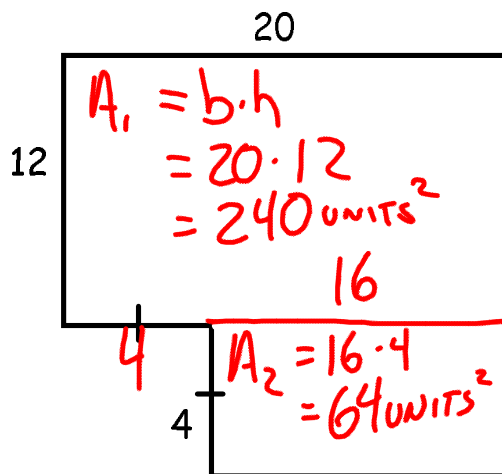
Section 11.1 day 1 - Perimeter & Area of Parallelograms

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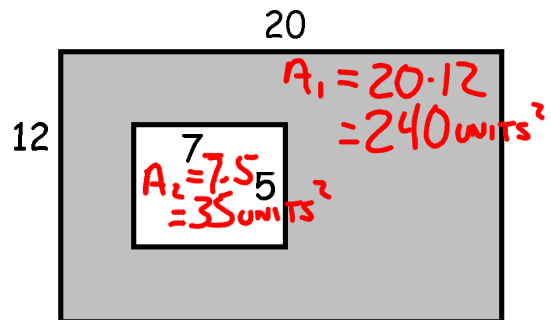
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Area by addition and subtraction.

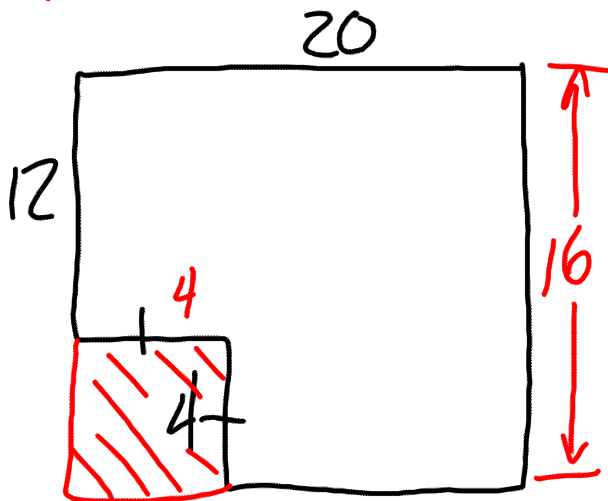
Find the area of the following:



$$\begin{array}{r} 240 \\ 64 \\ \hline 304 \text{ UNITS}^2 \end{array}$$



$$\begin{array}{r} 240 \\ 35 \\ \hline 205 \end{array} \quad \begin{aligned} A_{\text{SHADED}} &= A_1 - A_2 \\ &= 240 - 35 \\ &= 205 \text{ UNITS}^2 \end{aligned}$$



$$\begin{aligned} A_{\text{ENTIRE FIGURE}} &= 20 \cdot 16 \\ &= 320 \text{ UNITS}^2 \end{aligned}$$

$$\begin{aligned} A_{\text{CORNER}} &= 4 \cdot 4 \\ &= 16 \text{ UNITS}^2 \end{aligned}$$

$$\begin{array}{r} 320 \\ - 16 \\ \hline 304 \text{ UNITS}^2 \end{array}$$